



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,034	02/25/2004	Hiroyuki Shibaki	248734US2	9054
22850 7590 04/16/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER AZARIAN, SEYED H	
			ART UNIT 2624	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/16/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/16/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/785,034

Applicant(s)

SHIBAKI ET AL.

Examiner

Seyed Azarian

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-22 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 14-15 and 19-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (U.S. patent 6,424,429) in view of Aoyama (U.S. patent 6,724,941).

Regarding claim 1, Takahashi discloses an image processing apparatus comprising: an information embedding unit that embeds, into an image signal, decision information that is information about a specific parameter of an image (column 3, lines 15-24, refer to specific parameter, also column 6, lines 15-34, by inputting a security instruction for process data, further by inputting a coding instruction for process data, the process data is encrypted to a data);

an image-signal transmission unit that sends to an external device the image signal with the decision information (column 10, lines 26-42, encoded image data to be transmitted);

an image-signal reception unit that receives from the external device the image signal with the decision information (column 10, lines 26-42, encoded image data to be transmitted to PC 14);

an embedded-information extraction unit that extracts the decision information from the image signal received (column 15, lines 32-44, the encode character data to be extracted);

However Takahashi discloses (column 10, lines 26-42, the image processor compresses and encodes image data to be transmitted and on the other hand, function as data conversion receiver for decompressing and decoding image data, also column 27, lines 26-37, an image with a higher degree of security). But does not explicitly state its corresponding "determines degree of alteration of the image". On the other hand Aoyamain the same field of image processing method and recording medium teaches (column 2, lines 38-55, degree of spatial frequency (alteration): the maximum value of responses of the spatial frequency characteristics in the image signal on which the spatial frequency enhancement processing has been effected, further column 13, lines 12-32, image data of a plurality of types of resolution (pixel intensity), which differ from one another, wherein the respective image data of the different resolution are divided into a plurality of regions, which electronic watermark for embedding predetermined electronic watermark data in the image data.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Takahashi invention according to the teaching of

Aoyama because it provides image quality resulting from noise that can be prevented by suppressing the degree alteration and prevent improper reproduction of image data.

Regarding claim 3, Takahashi does not explicitly state its corresponding "about degree of alteration graininess of the image". On the other hand Aoyama in the same field of image processing method and recording medium teaches (column 11, line 58 through column 12, line 13, image processing are pixel density conversion, which for enhancing the sharpness while suppressing "graininess" and special image processing).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Takahashi invention according to the teaching of Aoyama because it provides correction of deterioration in the image quality, which can be easily be implemented in an images device such as copiers.

Regarding claim 4, Takahashi discloses the image processing apparatus according to claim 1, wherein the decision information is information about degree of alteration of density of the image (see claim 1, also column 14, lines 55-66, using density setting data).

Regarding claim 5, Takahashi discloses the image processing apparatus according to claim 1, wherein the decision information is information about degree of alteration of the image and pixel position information that indicates where the decision information is embedded into the image signal (column 12, line 56 through column 13, line 14, signal indicating information area);

and he embedded-information extraction unit extracts the pixel position information, and then extracts the decision information based on the pixel position

information (see claim 1, also column 15, lines 33-44, extracted the particular information).

Regarding claim 6, Takahashi discloses the image processing apparatus according to claim 1, wherein the decision information is a predetermined analysis pattern (column 20, lines 49-61, document analysis processing).

Regarding claim 7, Takahashi discloses the image processing apparatus according to claim 6, wherein the decision information is embedded is embedded in an image area where it is hard for a user to recognize the analysis pattern (column 6, lines 15-24, higher degree of security can not be exposed).

Regarding claim 9, Takahashi discloses the image processing apparatus according to claim 6, further comprising an image area separation unit that identifies areas in the image, and the information embedding unit embeds the decision information in accordance with the areas identified (Fig. 36, 37A and 37B, column 30, lines 16-40, each document is separated into several portions area).

Regarding claim 10, Takahashi discloses the image processing apparatus according to claim 1, wherein the decision information is numerical information representing a status of the image before the decision information is embedded (column 14, lines 38-54, refer to numerical values).

Regarding claim 15, Takahashi discloses an image processing apparatus comprising: an information embedding unit that embeds, into an image signal, information about density level of a predetermined pixel of an image and information about a position where the information about density level is embedded in the image

signal; an image-signal transmission unit that sends to an external device the image signal with the information about the density level and the information about the position (see claim 1, also column 14, line 55 through column 15, line 30, setting data for an automatically adjusted density selection).

3. Claims 16-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (U.S. patent 6,424,429) in view of Aoyama (U.S. patent 6,724,941) as applied to claims above and further in view of Tretter (U.S. patent 7,057,767).

However regarding claim 16 neither Takahashi nor Aoyama do not explicitly state its corresponding "predetermined pixel is a pixel of a white background level". On the other hand Tretter teaches (column 5, lines 8-14, the background color estimated from the data as the image been scanned, and pixels that are in the expected range are pushed towards a predetermined color (e.g., white)).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Takahashi and Aoyama invention according to the teaching of Tretter because it provides removing noise from scanned image accurately, without removing important content which can be easily be implemented in an imaging device such as copiers.

With regard to claims 2, 8, 11 and 12, the arguments analogous to those presented above for claims 1, 4, 9 and 10 are respectively applicable to claims 2, 8, 11 and 12.

With regard to claims 14 and 17-22, the arguments analogous to those presented above for claims 1, 4, 9, 12 and 16 are respectively applicable to claims 14 and 17-22.

Allowable Subject Matter

4. Claim 13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(U.S. patent 5,482,265) to Nakazato et al is cited for sheet feeder for an image forming apparatus.

(U.S. patent 6,600,828) to Kawamura is cited for image processing method and apparatus and storage medium therefor.

(U.S. patent 7,130,442) to Braudaway et al is cited for protecting images with an image watermark.

(U.S. patent 5,960,246) Kasahara et al is cited for to image forming apparatus with powder pump.

Contact Information

Art Unit: 2624

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian
Patent Examiner
Group Art Unit 2624
April 8, 2007

A handwritten signature in cursive script that reads "Seyed azarian".